010032 Interviewer: Tell us a little bit about your background, where you grew up and lived, what kind of education you had and your name.

010038 Jack: O.k., I'm Jack Craig and uh, I was actually born here in Cincinnati. My father worked for P&G for about four years. I moved to Lima, Ohio when I was about eight years old. My father moved up there with Procter & Gamble, so I actually spent most …, I grew up in Lima. I went to college at Ohio State University. I graduated there with a degree in civil engineering. After I left, I graduated from school, I moved and got a job in Washington, D.C. working for the Navy, mostly doing civil engineering work, ship and submarine design and so forth. I moved back to Ohio in the mid '80s and I worked for General Dynamics Corporation back in Lima, Ohio where they made and are still making the M-1 tank for the Army. And I eventually came to Fernald in January of 1988, at that time envisioning that the site was undergoing a major construction effort to gear up for more production, and things quickly changed after I moved here.

010157 Interviewer: Before we get to your moving to Fernald, can you just tell us a little bit about what is about engineering that attracted you as a young person, and led you to a career in this field?

010212 Jack: Why I was attracted to engineering, I don't think there was any one thing. I was always talented in math, so I think math was one of the things that led me to civil engineering. Actually, when I first went to college I had a rough time with Calculus, and I actually got out of engineering and was in business administration for about an entire year. Didn't really like where I was headed there, went back into engineering and eventually graduated in engineering. In addition to math, I always liked building things and I think those two combinations led me to civil engineering.

010254 Interviewer: So you're working in Lima in the 1980s, late '80s period, how did you find out about an opportunity with the Department of Energy at Fernald?

010305 Jack: Totally by chance uh, the circumstances around how I got here. My then girlfriend, now wife, had moved to Cincinnati, I was living in Lima. I had met her when I was living in Washington, D.C., and uh I'd decided I wanted to move to Cincinnati and would begin looking for a job and uh I had been a federal employee before 'cause I worked for the Navy, I knew a lot about the federal … being a federal employee. So at the time they were having a lot of problems, the Department was having a lot of problems recruiting anybody to come work at Fernald and at the time they were actually sending Department of Energy employees to Fernald from Oak Ridge on a temporary basis. None of them wanted to move up to Fernald at the time so there was a big push at that time to hire federal employees to work here. Uh, that was one thing. Once again I mentioned that the plan at that time was that they were looking for engineers. The emphasis at that time was there gonna be …, was a lot of construction on-going at the site. They were gearing up for an increased production campaign, not only increased but they were doing a lot of refurbishing of the old buildings at the time, and it was a good fit for my background and interest at the time. So that's kind of how I got here.

010432 Interviewer: Can you recall just an initial impression driving up maybe the first time or getting involved the first few months? What kind of the look, the smell, and the feel of the place was in the final several months of production, some of your initial impressions?

010453 Jack: Well I had worked at a number of other government facilities where there was security and really the amount of security at the time at Fernald back in the late '80s was not really greater than I had experienced before. So the security aspect wasn't real great. The first day on site, I, one of the things I noticed there was not many federal employees there, number one. I think at the time I came there were seven or eight full-time federal employees at Fernald, that was unusual for me, I'd never worked in an office that small. They were kind of segregated away from the contractor employees. We were, the federal employees, were all up on the second floor, back end of the administration building and that was a little unique for me 'cause I, there was seven or eight federal employees with, you know, 1,000 or 1,200 contractor employees. My impression driving up, it seemed to me like a very old facility, but I kind of knew a little bit about that 'cause one of things they talked to me about was they were undergoing some refurbishment of old buildings to make 'em more efficient and to increase production. So that wasn't a big surprise to me either. One of the things, I think, was a little bit unusual, not many of the people that I met in Cincinnati knew anything about Fernald. They knew where it was kind of but nobody really knew what it did and even my first day there I wasn't totally sure what they did. I knew it was a uranium foundry, but other than that I wasn't really sure what the uranium was for, where it went, and so forth. So, I wasn't given a lot of information about the mission of the site other than it was a foundry and here's some things that we need to do and we'd like you to be involved with.

010648 Interviewer: What was your first project, retooling a manufacturing building or looking at the overall picture or what did they want you to do?

010655 Jack: There was a number of …, it wasn't any specific project. You know, there were, I believe, only three or four other engineers, DOE engineers, at the time. So there, the projects were spread out among the all the people in the office. My first projects, I can remember that we, and still exist on site, the in vivo monitoring facility where they do internal radiation monitoring. That facility was just being built in the late '80s; I had some involvement at the tail end of that. There was just beginning also some of the early work on some of the environmental work on the site. Pit 4, which is one of the six major waste pits in the waste pit area, was actually going under what they call the RCRA closure at the site when they put a cap on it. I was involved with that and a few of the other smaller production upgrade projects. A lot of them made the bigger plant upgrade projects were right in the middle of being executed and they had other people assigned to those. So I had a wide variety of smaller projects at the time.

010809 Interviewer: Did you have any thoughts about sort of the industrial practices that you observed in terms of environmental or safety compliance, you know the way business was done in the 1950s, '60s, and '70s at most industrial facilities making whatever are probably different then they are today, but we had things like a waste pit or we had various types of either dust or airborne particulates coming out from time to time and just the overall look of that plant, what were your feelings?

010844 Jack: At the time I came in the late '80s, a lot of those issues had begun to be addressed. I came from General Dynamics, which was a much larger operation, it was a three-to-four thousand employee, very large operation where they basically took a bunch of pieces of metal at one end of the plant and drove out a tank at the other end. So, as far as industrial processes go, I didn't notice a lot of differences. There was as part of the production here, there were a lot of stacks, ovens, that was a little bit new to me. One of the things I did early on was work on permitting, air permits, dust collectors, stuff like that, which I really had never worked on before. That was unique I think to the site. But as far as your normal industrial processing, I didn't see a whole lot of difference in the late '80s from what I experienced at General Dynamics.

010949 Interviewer: What was the federal regulatory presence like in the final days of production? You mentioned the RCRA Law, which dealt with hazardous waste storage issues, uh. There was a battle I think going on at this time, sort of a state and federal EPA, to what extent they were going to get involved with DOE operations. Did you have any encounters or get briefed at all on the role of the regulator at DOE, Fernald … ?

011021 Jack: Not initially but once again, the time I came some of those things had already been worked out. There was in place at the time I came what is now called the consent agreement. At the time I think it was a federal, a federal facility agreement, I think was signed back in 1986. So some of those things had been resolved by the time I got there. The state involvement, I think, kind of happened soon after I got there. There was a consent decree signed with the state of Ohio and the Department, I believe, in December of '88, which I guess was negotiated the whole year that I, the first year I was there. I really wasn't involved much in that negotiation but some of the framework for the regulatory structure at the site was in place when I got there or was in place shortly after that. There wasn't a lot of federal presence on site, I think we had one U.S. EPA point-of-contact project manager and one Ohio EPA project manager that I was aware of at that time and they essentially were, did all, they were the entire interface we had with the regulators at that time, which is certainly different than today.

011139 Interviewer: Can you talk a little bit about what it was like to sort of have this structure where the Department of Energy was running an operation in Ohio from an office in Tennessee, either at least up to the point where the mission changed, that there was that regional thing like you said there were only about seven or eight DOE employees at Fernald. How did that work in terms of getting instructions or getting communication from Oak Ridge?

011208 Jack: It was a little awkward. We had a senior Department of Energy manager at the site**,** Jim Reafsnyder, he had come from Oak Ridge. I didn't have much interaction with the Oak Ridge people during those times, uh, most of the interactions came through Jim Reafsnyder and was transmitted down to the DOE office. They did things for us like personnel, they did our personnel servicing, they did some of the contracting, some of our financing and stuff like that. They didn't, as far as the construction oversight and technical help, there wasn't a great amount of that. They did provide from time to time expertise in ES&H [environmental safety and health] and radiological safety and things like that. But it didn't work out too well as far as I'm concerned. The late '80s, early '90s at Fernald were very busy, busy time. There were many,

you had competing missions, you had interface with the regulators that wasn't always going so well and with the public also. Seven or eight people just couldn't handle all that. So we did get help from time to time but it certainly wasn't what was needed at the time.

011328 Interviewer: When you first got there, what was the sort of public affairs, public information program at Fernald in terms of dealing with either the media or the general public giving out information, this is before the shutdown?

011344 Jack: I don't recall any from the Department's standpoint. We didn't have a public affairs officer. I think Westinghouse at that time did have a public affairs point-of-contact and I think Westinghouse did a lot of that at that time, they were the contractor when I came on site. The Department, our main public affairs person was in Oak Ridge and I think they communicated to the Westinghouse point-of-contact, but, at least my first year or two at Fernald there wasn't a lot of focus on that from the Department's standpoint.

011421 Interviewer: So there were very few if any community meetings?

011424 Jack: I don't, once again I don't recall, I'm not sure we had any the first year I was here. The first public meeting I can recall was a large meeting that was held in the Ross Junior High School and it didn't go well. I don't think DOE or the contractor were really prepared at that time to hold such a meeting. It wasn't, it just didn't happen very well because I don't think people really understood how to do it at that time. I think there were many people who tried to do the right thing, but I just don't think they were skilled or trained or expected, or could be expected to address the amount of public interaction they were going to have at that time.

011512 Interviewer: Let's go to the day, if you can recall the day that the initial temporary shutdown was ordered? I don't know if you were on site that day, if you can remember what it was like when someone gave the order to essentially turn off the machines or stop production, why that was ordered and how folks around the place felt about that day.

011435 Jack: I can't remember a specific day, I do remember, I came to the site in January of 1988. I believe that in March of 1988 the main customer for the site was the N-reactor out of Hanford. A lot of the depleted, not depleted uranium, enriched uranium that was produced at the site went out to Hanford for their production reactor work at the N-reactor. I think, as I recall their need for our uranium shutdown in March, so there was a lot of uneasiness, uncertainty for probably the rest of that year. I mean there were a few other customers but the N-reactor was the main customer at that time. I believe the actual decision to kind of shutdown, if you will, happened the next year, if I recall. You know there were a lot of things happening in the Department at that time across the country as far as these facilities, environmental issues, health and safety issues. Around the 1989 time frame the Department sent out what they called these "tiger teams" to look at ES&H issues and try to get their hands around everything at these sites and put a plan in place. The actual shutdown of our, I think of the production process, happened shortly before that "tiger team" review came to Fernald in the early summer of '89. And it was kind of shut down, I think, in preparation for that "tiger team" and never really started back up after that.

011714 Interviewer: What did the, in your opinion, kind of the workforce and your colleagues, DOE colleagues, what was it like in that sort of period in between temporary shutdown and permanent shutdown period in the '89, '90, '91 time frame in terms of figuring out what the mission was going to be or what the role of Fernald was going to be?

011738 Jack: Well as I recall, once again, you talk about a small DOE staff, and a lot of the things we were doing as far as construction projects and so forth, kept right on going. Because we didn't stop 'em because there was never a firm decision that things weren't going to start up. So our role and the projects we were working with kept right on going. We didn't have a lot of interaction with the actual workers and the production operations, at least I didn't that wasn't what I was doing. We had other DOE employees that were more involved in the operation side, I really wasn't, I had very little interaction with the workers at that time. So any reaction from the workers about the shutdown or temporary shutdown I really wasn't in tune with. The construction or operations and some of the projects I was involved with kept right on going.

011833 Interviewer: Did you and your colleagues in your office feel that probably it would start up again at some point or weren't sure or?

011843 Jack: I, I had my doubts. I didn't think it really would. I think, I think we came to the realization pretty quick that that facility had kind of outlived its use. Even with whatever band-aids they could put on, it probably wasn't in the position ever to do operations again. And around that time frame there was kind of also the realization that there was going to be a very large environmental clean-up program to be undertaken so I think people kinda, at the same time production was shutting down, people realized there was this other mission, they weren't really sure how big it was at the time, but they knew there was another mission that was gonna have to be executed shortly after this production decision was made.

011930 Jack: You mentioned a couple of minutes ago that the first meeting at Ross Junior High School, was this after the shutdown?

011936 Jack: I believe it was before, I'm not positive, I think it was before the shutdown. It was one of the first meetings, it may not have been the first, the first one I had gone to do where we began a dialogue of saying here's what some of the environmental problems and here's kind of an opening up to say here's some of the issues we have and maybe a general idea of a path forward which we might have to address some of them. It was in the early stages of investigating the site, trying to understand what the contamination problems were and I think it was more of providing of information to the community type meeting. There may have been others before that, that's the first one I had been involved with. I don't think there was much discussion at that meeting about production or production shutdown.

012026 Interviewer: When the mission officially changed or when it was became clear that it wasn't going to be producing any more, how over the next few years, early '90s did your job start to change as the mission of the site started to turn toward remediation?

012045 Jack: Well I had, like I mentioned, I had had a number of smaller projects that were of the environmental, in the environmental area. Essentially what happened at that time frame, around 1990-1991, a couple of things happened. Number one, shortly after this "tiger team" review that we had done in the summer of '89, one of the big findings of that review was that we were severely understaffed, our office was. So we, the Department began a campaign to try to get more federal employees at the site. That's probably the biggest thing that changed in that time frame was the presence of DOE at Fernald. And we went through, I would guess a two-year period, where we went from eight employees to 30 to 35 employees. At the same time you had this environmental program that was just growing larger and larger all the time because as we would find things through the investigation, things would be discovered and the scope of this program just kept growing. My early role in that was I was involved in what they call the remedial investigation feasibility study, which was essentially a large program to go out and sample across the site. Sample the soil, the groundwater, try to identify where the problems were, how significant they were, and uh, so that happened. That had been going on to some small extent when I had gotten there but it grew larger and larger and more resources, both people and dollars, were put on that during the time of conversion from production to this environmental mission. We went out and there was a sub-contractor hired to help do that work. Westinghouse was very involved in that work and as I remember a lot of field sampling and a lot of paperwork because everything we found had to be generated or we generated a document. This data collection process once again was a very big thing to get your hands around, it was something that a lot of people at the site didn't have experience in. So, we did get sub-contract that help to help with that somewhat.

012305 Interviewer: We're you involved with the move to split the site clean-up organization into operable units or had that happened before you arrived?

012315 Jack: Yeah, that happened as part of really the transition to the large clean up program and it was a way, it was outlined under the CERCLA law, a way where you could better focus on different problems and it was also a way for us to organize our resources to get more expertise and more focus on specific things. So I was involved in that. Uh, we also, I believe around 19.., September of 1991 we, let me back up a bit. DOE had signed a regulatory agreement in 1986 which outlined a bunch of things that had to be done. Well, I think DOE quickly found out that we couldn't meet all the things we had signed up to so there was a long process of re-negotiating that agreement. That was completed, and I was really the lead on that, we completed that in September of 1991. That outlined better the operable units, the specific new milestones we had, the new schedules we had, and that has really transformed into, you know, the path for how we got to where we're at today. Not a whole lot, we're still working under that original 1991 clean-up agreement and uh the definitions in there and the schedules in there changed somewhat, but that was another big milestone was getting that thing revised, getting it re-negotiated, setting a path forward for the clean up based on that. It was something the regulators and DOE could agree to at that time as a good plan and a good path forward.

012453 Interviewer: How much of that was moved forward by sort of the prominence Fernald was getting, for example getting on the superfund list, uh along with few other DOE sites in terms of national media attention on environmental issues at Fernald, I believe there was a TIME

Magazine cover? How did that kind of move forward, kind of joint action by the regulator and DOE to say we need to get this organized in terms of getting it cleaned up?

012527 Jack: Well, a lot of things happened at the same time. I think certainly the notoriety, the public, the press helped focusing in getting resources to the site. Once again, at that time there was almost like a national push among all the DOE sites to look, to recognize these problems, publicize these problems, get the information out. All of that was happening around the 1990 time frame. There was also, what kept a lot of the Fernald issues in the paper, there was an ongoing lawsuit with the public at that time and that generated a lot of information, a lot of interest. That kept Fernald, I think, in the newspapers and politically on the front screen and that helped get Fernald resources. That helped the regulators stay focused on Fernald. I think if you look at who the regulators assigned at Fernald they put their best people. Graham Mitchell who was the Ohio EPA point of contact when I came here back in 1998 [1988] still works somewhat on Fernald today. He was, in my opinion, one of the best regulators we could have had here. He knew the site and shortly around this transition time frame the U.S. EPA assigned a new project manager, Jim Saric, to the site and Jim has been, once again I think, a good regulator. And both of them helped push this clean up to get it going.

012700 Interviewer: Both of them were at the last Advisory Board Meetings, so they're still ...

012703 Jack: Right, Jim is still the U.S. EPA project manager for Fernald, I think he's been almost ten years now. Graham has a little bit different job now, but he still has responsibilities as one of his projects for Fernald.

012718 Interviewer: When did you move to a point where you had more administrative and management responsibilities as the DOE lead on the overall site? How did that progression work?

012732 Jack: Well, as I had mentioned I was the lead on negotiating in 1991 our new agreement. Shortly after that, well a couple of things happened kind of in sequence. In 1992, the Department decided that we wanted to get a new type of contract here. Westinghouse was the contractor at that time, they were … had been on site and the contractor since 1986. Their real mission under their contract was to produce uranium and that kind of changed at the tail end of their contract. So the Department decided to put a new contract in place that really focused on clean up versus operations. And so through that time frame I was somewhat involved in that contracting but I also had increased responsibilities after we negotiated the compliance agreement to kind of lead and organize, at least the DOE part of it. Shortly after our new contract was put in place, FLUOR was awarded the contract at that time in 1992. The Department also decided to create what they called a DOE field office here at Fernald, which once again would help getting more resources here for the DOE employees and I think helped us getting more money for the clean up work. As part of that organization I was given more responsibility. Around that time frame I was given, I had started out really with some of the operable units, I was for a short time the operable Unit 4, which was the silos project, lead. Shortly after the Field Office was created, I was given kind of all the project lead and we had individual people assigned to the operable units. Uh, and that was the '93-'94 time frame. Shortly after that, they

created what they called the Ohio Field Office, which was an office created that included Fernald, the Mound project in Miamisburg, the West Valley project in West Valley, New York, the Battelle-Columbus project in Columbus, and the Ashtabula project. We were one of the project offices within that and so a new structure was put in place here and I was put as the acting … what they call project director at that time for Fernald in '94 and then I was actually selected as the project director in '95.

012958 Interviewer: As this is happening for you personally, your role changes a little bit at the same time in the early'90s some programming starts to happen both because of CERCLA requirements and because of the decision to install a Citizens Advisory Board in the early '90s to get a more regular program of public interaction. Can you talk a little bit about your perception about sort of the early stages of that and then how you started to fit in, when you became more of a spokesperson or a point of contact for the general public, how you needed to get a little bit of a education in terms of dealing with the public?

013039 Jack: Right, yeah, I had, even before the Citizens Advisory Board was created, we were holding normal public meetings concerning the clean-up where we would try to status the public as more of a providing of information mechanism on all the operable unit clean-up work. Number one, it was a mechanism to provide information but also to answer questions as best we could at that time. We did that probably from, as far as I can remember, from the 1990 through probably '92-'93 time frame, that happened routinely. I don't know if it was quarterly or monthly. I believe the '93-'94 time frame, I think it was '93, partly because I think FLUOR, who came in new, realized that there needed to be a new mechanism to make some of these clean-up decisions that needed to be made and in talking with the DOE staff, had the idea of this Citizens Advisory Board where we would get a group of citizens, which was a cross-section of the community, to help provide input to our decision-making but also for us to provide information, disseminate the information. That was created I believe in 1993, I wasn't really involved in the formation of that. We, Ken Morgan, our public affairs director, put a process in place where we actually had somebody independently convene this group. We didn't want, I think, to be accused of trying to steer it one way or the other so I think that worked out very well. They were put in place, nominated, they hired their own facilitator for their meetings, and uh, they kind of set their course, they set some of the agendas. We gave them some ideas of things that we'd like them to help on, at that time we knew we're going to have to decide on what the clean-up levels were going to be for the site, how much contaminants were going to be left. We also knew that the future use of the site was going to be a big issue. What did the community want, did they want residential use, did they want agricultural use, did they want industrial use. We thought the Citizens Advisory Board could help make that decision. So, that was one of the tasks they were given and then it's evolved into helping make those decisions but also being involved in things like validating or helping set priorities, and then specific technical issues that they may like to be involved with.

013318 Interviewer: Did Hazel O'Leary, she was the secretary for DOE for a fairly short time but in the early years of the Clinton administration attempted something called an "openness initiative" where there was an effort to either declassify or make more available to the public

types of information or types of access that wasn't around before, did that impact Fernald very much or was Fernald doing some of this stuff already or a little bit of both?

013352 Jack: I don't recall it being a huge impact to us. We, like I said, in the early '90s we had begun these community meetings at least with the clean-up. We didn't have a huge amount of classified material at Fernald, a lot of that stuff you know was transferred down to Oak Ridge when production was ceased. So I don't believe it had a huge impact on us. Certainly the tone and the policy coming out of the Department was a little bit different than it had been. I think it had a much bigger impact on other DOE facilities then it did Fernald but it's certainly helped, helped, I think, make what we were doing here more open. CERCLA, the clean up requirements we were under at that time, also had a lot of requirements for public interaction, public reading rooms. So, the CERCLA law helped drive a lot of that stuff too in addition to DOE policy.

013437 Interviewer: Along with the CERCLA law, I've always been interested in is this notion of gathering public comments and then a regulatory requirement to create a response document where the DOE in this case, at least acknowledges each comment, provides some kind of statement, not always necessarily satisfying the person making the comment, but trying to use that to incorporate at some level some of the public wisdom into some of the clean-up decisions. Is that one of the aspects of CERCLA that you're talking about? What other CERCLA regulatory things do you think have been positive for the site?

013530 Jack: That's one thing, but frankly I'm not sure my experience with the public comment of these documents has been real useful. These clean-ups and the data you generate are very complicated and I think it's very difficult for members of the public to look at some of these documents, and get into the details, and really provide the documents don't really provide them a lot of information. I mean we try to make it a point to summarize a lot of these things, to get them into readable, layman's terms, so some of the bigger issues that we needed input from the public they could make with the use of some condensed versions of some of these things. So I'm not sure that did it. But I know some of the … the public meeting, I think the public meetings were probably more effective than any of the written document reviews where the public had the opportunity to come up and talk to the project managers, ask them questions. Then they also had formal public hearings, where they come up uh with the transcript make the public comment instead of having to read through a five-inch thick document they could get up and make the public comment and have it on the record.

013648 Interviewer: I noticed just … I've been out here some since the early, the early to mid '90s, I noticed a fairly high level of stability in terms of key personnel, the public affairs officer for example and other folks that even within the Ohio EPA that doesn't seem to be a lot of turnover of people. I think that's been helpful but I don't know if that was … that's been intentional or just the way things have fallen out or the site's undergoing a transition now in terms of a new management, some type of new management, but generally it's been a fairly stable group of folks that have been interacting ... **(tape problem)**

020046 Interviewer: Yeah, I repeat my question: it seems like there's been some stability of personnel both regulatory and DOE in interacting with the public, and it seems like that it's been beneficial. I'm wondering what has been some of the reasons for that?

020103 Jack: I think it's, there're a couple of reasons. One, I think the public interaction at Fernald is really important, it has been important to our clean up here over the last ten years and I think when the public gets comfortable interacting with that specific individual I think that is something we really value. And we like to not lose these types of people. I think the fact that this facility is near the city of Cincinnati makes it a little bit unique in the Department, whereas a lot of these other DOE facilities may not be near central populated areas. You have Hanford, you have Idaho, Oak Ridge, I think that helps keep people in this area. The bottom line is people like living in Cincinnati and they're not interested moving to a remote location to do this type of work. And I think for whatever reason, the DOE people, I can speak for the DOE people I can't speak as much for the contractor people 'cause they've had a little bit more turnover because of the contract situation, but I think the DOE staff at Fernald really like what they're doing. They're dedicated, they like the mission, they know it, they've almost, a lot of 'em has started in the investigation stage all the way up to where we're at today with actually starting to address and clean up some of the problems. And a lot of the workers like seeing that through. I think those are probably the main reasons. And I think it is, we do try to keep people here as much as we can and right now in fact we're working on ways to incentivize people to stay versus leave. So we see a problem that we're going to run into is that people are going to see this mission going away, their job going away and they're going to look for other opportunities. We want to keep the people here as long as we can so we're looking at ways to do that.

020306 Interviewer: Can you remember the first time you met Lisa Crawford and what just your general impressions about the group FRESH, as one of the community groups that's been very fairly influential out here?

020322 Jack: I don't remember the first time I met her face-to-face, but I think the meeting I referenced earlier, the community meeting at the Ross Junior High was the first time I had heard of FRESH but I hadn't seen and I didn't, wasn't that familiar with them. My impression was that I was glad I wasn't at the podium that night and I knew, I remember thinking I was hoping I never would have to get up in front of the audience like that because it was very contentious. There was a lot of things going on at that time as far as lawsuits. I think the Department wasn't providing information very well at that time. I think the community was looking for a lot of information and the Department just wasn't in a position I think both policy-wise and even organizationally-wise to provide that to them. So they were upset, rightfully so, and I had never personally had any experience in dealing with the public like that. I had very little experience in dealing with the public in general and certainly not a public that was upset like FRESH was at that time. So I wasn't interested getting more experience with that right then.

020440 Interviewer: When did you have to take that podium, you know, for some of these briefings? I think the atmosphere perhaps had changed at that then but …, when did you start …?

020449 Jack: It really hadn't. It was, what we did was instead of running the meeting like we tried to that night, which I'm not sure who had set that up, we tried to have smaller meetings, number one, where we talked about specific issues. Instead of having one spokesman up there standing behind a podium we tried to kind of break it into specific issues and then have individuals who are more, who are closer to the issue, project managers, talk about their individual issues. That's kind of where I got started. I was one of a number of people who routinely got up and talked about my projects and eventually instead of talking about my projects I ended up kind of introducing the project or doing the introduction and let other people do that and I kind of just evolved into being one of the DOE spokesmen primarily at that time.

020546 Interviewer: How much over the last four, five, or six years has there been an effort to sort of engage the public, almost not necessarily on a daily basis, but really more of an ongoing basis as opposed to just the meetings per se? It seems like there's more either through written communication, or maybe there's smaller briefings or smaller meetings, that there's sort of an ongoing dialogue now.

020609 Jack: Yeah, I think what's happened, and I think some of this was at the public's request, the interaction with the public has become less formal. Less standing up behind the podium, less giving them documents to read and taking their comments. It's more, it's evolved into smaller meetings sitting around the table, talking about specific issues really at their request. I mean it's not like we're going out and forcing information to people. I think we really have meetings now, more or less, to address exactly what they want to hear. We do have, we still have the Citizens Advisory Board which is still operating today, we have other smaller groups that are established to look at things like stewardship, long-term monitoring, and things like that that people are interested in and want to be kept up to date on in a routine basis. We do things like we go to the monthly FRESH meeting, we give a general status of what's going on at the site, try to answer questions at that meeting, and then we provide, you know, newsletters and so forth to provide information to people. That I think …, we try to make it as informal as possible. One, because I think that's effective and two, that's what people have asked for.

020733 Interviewer: What about, can you make a comment about communication sort of up the other direction, up from a particular site like Fernald up through perhaps a Field Office level and up to DOE headquarters when you do things like work with Congress for annual appropriations or provide status reports, how's it been working that end of the communication?

020802 Jack: It works, it hasn't changed a whole lot. We don't do a lot of direct budget discussions with Congress. Most of that work has been delegated to Headquarters and they do most of those interactions. We do from time to time talk to Congressional staff, provide information on the budget, provide impacts of different budget issues and also provide status of different project issues. But most of that by and large is done at headquarters. Our communication, I think, within the Ohio Field Office is very good, I'm up at Miamisburg right now, I moved, I was the Fernald director for five years and I from '95 to last year, I'm now the deputy manager at the Field Office. We, I have, you know, daily interaction with the Fernald staff and I'm down here routinely. Uh, we communicate with the DOE people formally three times a week; we have three staff meetings we do over the phone. Communication to

headquarters is not real formal. A lot of times they'll call the site directly, Gary Stegner, our public affairs staff, provides a lot of that information. Steve McCracken, the new project director at Fernald, will provide a lot of that information and we will at the field office. The Headquarters' structure has changed a little bit. We have a dedicated group of people at Headquarters that are called the, I'm not sure what their title is, Ohio Project Team. They have organized at headquarters to what they call a closure project office; all the closure projects within the Department are under that office now. Ohio, Rocky Flats and a number of the other sites are in that. So I think Headquarters is trying to organize to be consistent with our missions here so we are all focused on getting these sites closed and cleaned up and also they can focus on trying to address the issues that we need them to.

021011 Interviewer: Did you ever meet Thomas Grumbly? He was one of the early heads of the Environmental Management, mid 90's perhaps, or some of the other lead folks within what's called EM or Environmental Management. What have you seen sort of at the Headquarters' level in terms of commitment or priority to that phase of admittedly a multi-faceted mission for that, overall, for that agency?

021042 Jack: Right, yeah, I've had the opportunity to meet Tom Grumbly, he was out here a number of times. He was the, I think, the first Assistant Secretary for Environmental Management under President Clinton. I think he was very effective in running the EM program at the time. It was beginning to get a lot of money and a lot, you know, the program in the early '90s really grew astronomically. It grew from a very, very small program to the largest environmental program in the entire government, still is, and I think he was effective. He was a good communicator, he was a good listener, the public could interact with him directly. And I think he was good as far as interacting with Congress also, he was effective in that way. Al Alm came, he was the second Assistant Secretary after Mr. Grumbly, and he put a couple programs in place. He was actually, I think, instrumental in looking at the closure of these sites as a mission for EM and I think that's helped evolve into this closure project arrangement that we have here. So I think headquarters has been, the EM portion of headquarters, has been instrumental to drive us, help drive us to the closure mission that we're at today.

021205 Interviewer: It seems like a major challenge, at least one major challenge at Fernald now, is sort of going, thinking of a horse race, going down the home stretch and making sure the race gets finished and that's going to be a budget issue as much as it is a logistics and remediation pathway issue. It seems like this current budget is forcing Fernald to do some reorganization of thinking there, how, what is the Field Office going to be thinking about how it's going to need to sort of take a look at budget advocacy over the next several years to make sure that some of the plans in place, perhaps at other facilities, besides Fernald, but certainly at Fernald that they have a reasonable chance of getting that funding. What role is the Field Office going to play in that effort?

021302 Jack: Well I don't know if we have a specific strategy. I think the best way that we can assure getting additional dollars or getting the dollars that we think we're going to get is to be successful and be seen as a success within Congress. I think the Department and the EM program has a big hurdle to get over when they talk to people in Congress. Number one, there aren't a lot

of Congressmen who have, I mean these DOE facilities are in a few states, a few Congressional districts, so the overall support for these sites is not real great when you look at the total 435 members of Congress. That's one battle you have to fight. The missions of these clean-up projects are very difficult. I mean, they are some of the most difficult construction, environmental problems in the entire world and there's going to be problems, there's going to be pitfalls and those seem to be magnified. Congress latches hold of those and, you know, digs in and wants more information. I think one of our challenges is to make sure we're publicizing our successes as much as the problems that we run into are being publicized. So I think our biggest challenge is to make sure we keep making progress and we're viewed as a good project to invest in at the national level. Uh, I don't know what's going to happen with the budget process from here forward. I think, you know, we have been essentially told that we're going to have flat funding for the foreseeable future and we need to plan for that. We went to the new contract that we just awarded to FLUOR with the understanding that that would be the case, that we would be funded. And we're trying to do the planning consistent with that. I think, you know, if we can get flat funding, there's a chance we can clean this project up in the next six to ten years and I think if we could achieve that, that would be … that's a good goal to shoot for. I think it would be a good thing for all of us.

021522 Interviewer: I'm about ready to wrap up, I would like to get you to kinda think about that now you've been at DOE for thirteen years and I don't know if you've ever stopped to reflect on sort of the larger sense of the importance or significance of the work that you do and the significance of particularly the clean-up efforts at the sites that you deal with in Ohio? Sort of a larger picture of, you know, improving environmental quality in America in general or just sort of your thoughts about why you stay in this job that you have?

021610 Jack: (tape visual blank starts) Well number one, I think I'm very lucky. I came to this site at a time where I was given the opportunity to do a lot of things that a lot of people could never have experienced. I experienced very technical, a lot of technical challenges. I experienced interacting with the public. I experienced regulatory issues that many people don't get to deal with. So, I came here at a time where I think it was good for me to learn a lot of things, to grow. And I think career-wise, it's been good for me. I think being a public employee and being on the front line, dealing with the public, I think, is very rewarding. Many public employees are, don't ever get this opportunity. They're public employees but they deal with public employees their whole career. **(tape visual blank ends)** And here we are interacting with contractors, Congress, public, city officials, county officials and I think that's very rewarding to be on the front line of being a public servant but also, you know, seeing, going out you can see the results of what you've done but also interact with the public on a routine basis. As far as the DOE program goes, it's pretty amazing that from when I came here in 1988, which we had I think seven or eight DOE employees, I think Westinghouse at the time may have had ten employees dedicated to environmental mission, uh with a very small budget, to where we're at today, which I think we're viewed as one of the best programs as far as environmental programs in the Department. And I think we have turned skepticism, really negative attitude from the public toward the Department into almost 180 degrees. I think the public supports what we're doing here, they feel they're involved. I know that we make an effort to make sure that we're listening and I think what we've learned is that by all working together we've come up with a much better program.

And so I think I'm lucky plus I think we've made a lot of progress and I think we've addressed the public's concern at the same time.

021830 Interviewer: I have one last question, and then certainly if you want to add anything you can but the site is getting ready to celebrate it's 50th anniversary in May, there'll be some activities for the workers and the general public. And the overall impetus for this interview today is sort of a history project. You know, if you're speaking with your kids or grandkids at some point along the line about Fernald what would be some of the things you would tell them about the general history of Fernald, either, you know, in terms of its production mission or in the clean-up phase, that you think would be important for the kids to know for the future?

021907 Jack: Well, I think first and foremost the site served a vital national purpose. It was part of the defense organization of our country who helped to win the Cold War. I think the history of the site isn't well known. I think that there was a lot of positive things this site did that I think the workers should be very proud of. At the same time I think that the, one of the lessons is that in focusing on that mission, that defense mission in the future, we need to be a little bit smarter about how we do it. And not only focus on the mission but focus how that mission is impacting the environment and local community and I think the days of the secrecy and that are probably gone. I think that the secrecy well because of the Cold War being won probably isn't as important any more, but I think that interacting with the public, letting the public know what the site's doing, is just I think a policy that the Department and the country should follow from now on. I guess the other lesson is that, like I said before, that interacting as a team with the public, the regulators, the contractors has served a better clean-up. The Department couldn't go at it alone, the contractor can't go at it alone. These types of big public projects that are very visible have to have everybody involved and working together.

022048 Interviewer: Anything else?

022050 Jack: No, all right.

022054 Interviewer 2: Well yeah, something that the students, you know, what we are doing uh is to develop the student's perspective of the future, and you spoke eloquently of some lessons learned. Could you talk a little bit more and again since you've seen such a history, uh, some people would like to know a little bit more about the challenges, when you say that, uh, of cleaning up the silos, what, how especially there's a flat line in the budget, a little bit about how, as a engineer you might address that, the students, those are the kind of things that young people will be concerned about in terms of their future and what that might ...

022150 Jack: I'll try, and that's a future issue I think we're going to have to deal with. One of the, I guess, problems that you have to face in big projects like this is that no matter what amount of money you get, you have to prioritize what you're going to do. And in times where you don't get necessarily get as much money as you think you need, you have to address, you have to set priorities and then focus your resources on those priorities. One of the things we've done with the public here, is we try to work with the public and try to understand what they think is important in addition to what we think is important from the health and safety standpoint. At

Fernald there are a number of projects that I think we have jointly determined require us, no matter what our funding allocation is that we need to be working on those. One is the silos project and one is the waste pits and the other one is groundwater clean-up. Those three are, I think, unanimously, the regulators, the public and the Department and the contractor believe we really need to focus on those first. Technically, the groundwater clean up is not a huge issue, we have facilities built to do that. One of the issues early on was to make sure contaminated groundwater wasn't freely going off the site and contaminating or further contaminating off-site properties, which it had in the past. And I think we controlled that, it's no longer spreading. We're actually cleaning up the ground water with the facilities that we built. We have a facility built to clean up the waste pits. We have a contract in place that involves excavation and treatment and shipment of that material off site for disposal. And that project is well underway and is working well. Probably the biggest challenge we have is the silos project and uh, if you look at the risk to the public or risk to the workers of anything on site, that's probably the greatest risk. It contains the higher activity levels of radiation, which could present a problem if they were released into the environment. Luckily they're in what are concrete silos that are containing a lot of that right now. But they're past their design life, they're old and we realize that we got to do something out there to make it more safe. It's technically a large challenge because number one, it's a risk, it's a high contamination, high radioactivity content. But there's also a lot of unknowns. This material was put in there in the 1950s, although we have done sampling of it we're not exactly sure what it's going to be like when it comes out. We've tried and we've looked at different treatment technologies. The overall plan for that project is to get it out, treat it, and ship it off site to the Nevada test site. The technical challenge is getting it out, and we're looking at doing that under a number of different things, hydraulic mining or some other technical techniques. And then the other, once you get it out, we'll put it in a more stable condition at least in some large metal tanks, but the next question is well how do you treat it in order to put it in some container and ship it. And we've looked at a number of alternatives. Under FLUOR's new contract they have the ability to, what we call self-perform that work, they can do their own design and propose a treatment technology. I think what they're looking at, a lot of it hasn't been specified yet, they're looking at some kind of solidification or cementation type treatment where you're taking the materials, mix it with some additives and form it into something like a concrete, concrete form. But a lot of that stuff is still preliminary, and they're still in the design phase of that. So we have a long way to go there. That is actually the project that is probably going to take the longest of all that we have and, but it's also a project that is fully funded in all of our different scenarios. So if we do get a budget cut the highest risk, the project that is most important to people, will always be fully funded. So it won't suffer if we get a budget cut. But we're still a long way away from that and it's the biggest technical challenge that Fernald faces. O.k.?

022628 Interviewer: Thanks Jack. The CAB is going to discuss those scenarios more.

022635 Jack: It's still a long way to go there. Plus you know they'll discuss it tomorrow, but, you know, at one time there was a big push to subcontract a lot of this work because all these, you competitively bid it and you get the best people bidding on, you get the best price. Well, on the silos project we've done that twice now and neither one of them have worked. Both contractors have basically been a failure. So, we may be headed in a new direction where we're

going to say forget the subcontracting, we're going to let FLUOR self-perform it and at least that way you can hold responsible for it, and, but we're still away from deciding that. I'm sure you'll come up tomorrow.

Interviewer: Thanks for you time.